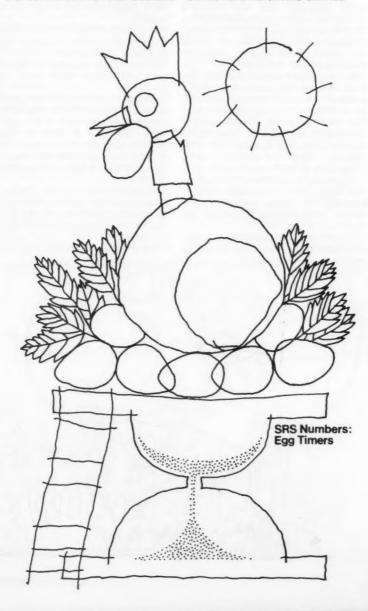
agricultural situation

THE CROP REPORTERS MAGAZINE • SEPTEMBER 1974 U.S. DEFARTMENT OF AGRICULTURE • STATISTICAL REPORTING SERVICE



SRS NUMBERS: EGG TIMERS

What are egg prices likely to be in

6 months or a year?

What is a producer's best management strategy for the months ahead—should he expand his laying flock in anticipation of higher prices for eggs or should he cut back orders for replacement layers because prices are likely to drop?

In the current period of sharp egg price and cost fluctuations, what egg producer wouldn't like to know the answers to these questions? However, there is a way he can get an inkling of what lies ahead—by a careful reading of two monthly SRS reports, Eggs, Chickens, and

Turkeys and Agricultural Prices. Egg supplies are the prime part of the egg-price equation since demand—the other part—usually shows little change from year to

year.

As a result, changes in supply have tended to dominate the price

picture, and any change in production usually is accompanied by a much larger change in the opposite direction in egg prices.

The starting point for just about all estimates of egg supplies, be they government or private forecasts, is SRS' Eggs, Chickens, and Turkeys

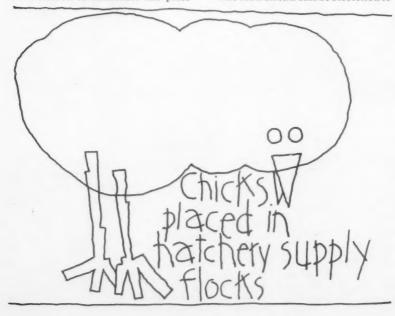
report.

Included in this report are the key data for short-term estimates of egg supplies: the number of layers on hand the preceding month, eggs laid per 100 hens, and total eggs produced.

However, producers who want to take a longer look at possible egg supplies—those in 5 or 6 months' time—can get a clue to what's coming up from another set of data in the report: the number of egg-type chicks hatched during the preceding month.

Roughly half of these chicks can be assumed to be pullets—and consequently are likely to become part of the Nation's laying flock within half a year's time.

The look ahead can be stretched to



nearly a year—though the view is bound to be a little less clear at that distance—if a producer notes what's happening to placements of pullet chicks in the egg-type hatchery supply flock.

These chicks will, in 5 or 6 months' time, become the parents of the pullet chicks that in another 5 or 6 months' time will enter the laying

flock.

Of course, along with watching the poultry scene, producers have to keep track of developments in the

feed economy, too.

Egg-feed price ratios, as reported in SRS' Agricultural Prices report, have a lot to do with the management strategies producers are likely to follow in upcoming months: how long they'll keep their layers in production, how heavily they'll cull their flocks, how many eggs they'll save back for breeding flocks, how many birds they'll force molt. These are all key factors in figuring future egg supplies.

The current USDA reading of SRS' data regarding developments

in the egg and feed economies indicate restricted egg supplies for the remainder of 1974.

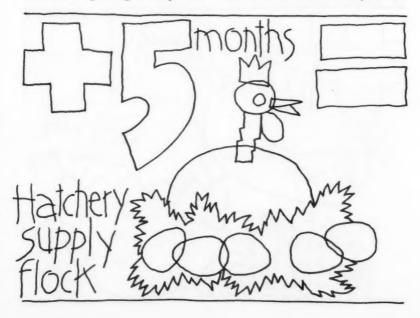
Earlier prospects for egg production to exceed 1973 levels during the rest of the year have just about vanished, in the opinion of USDA forecasters.

It had been expected that last year's increased hatch of egg-type chicks would result in layer numbers matching year-earlier levels in early 1974. However, this was more than offset by a heavier slaughter of hens.

Egg-type hatchings in late 1973 pointed to June 1974 as the last month that a larger number of pullets would reach laying age. January-May 1974's egg-type hatch was 225 million, 7 percent below the same period the year before. In addition, eggs in incubators on June 1 were down 1 percent.

These numbers point to fewer replacement pullets reaching laying age during July-December.

With pullet replacement numbers down, whether producers decide to cull or force molt their old layers will



be crucial in determining the level of second half egg production.

Through the first half of the year, producers were opting for culling. Through May almost 5 million more mature hens had moved through Federally inspected slaughter plants than the year before.

Undoubtedly, producers were responding to the poor egg-feed price ratios which had persisted through the first half. On June 15, the ratio was down to where 5.8 pounds of laying feed were equal in value to a dozen eggs, the lowest ratio since this series was begun in 1963.

However, the possibility of easing feed prices later in the year and the likelihood of increased profitability as egg prices start to increase seasonally—coupled with the low prices farmers are receiving for their old hens—could serve to reduce culling rates in the second half and increase the number of force moltings. These factors would help offset some of the decline in layer numbers.

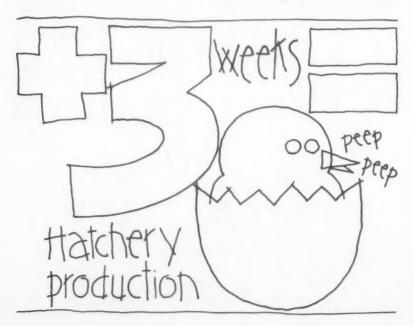
Egg prices are expected to increase seasonally through the summer and fall—although they're not likely to reach the high levels set in second half 1973.

A BIG BREAK

More than one out of every 10 U.S. eggs got broken last year—and not because of carelessness, either.

Quite the contrary, commercial egg breaking has grown into an important segment of the egg industry—usually worth over \$200 million at average price levels. Last year some 6½ billion eggs were broken commercially, yielding 721-million pounds of liquid egg.

Biggest buyers were bakers, confectioners, premix manufacturers, and food manufacturers—but consumers are becoming customers, too. Recently introduced family-size packages of convenience egg products such as scrambled egg and omelet mixes



have caught on well with home-makers.

The egg products industry has long served as an outlet for seasonal surpluses and helped shore up springtime shell egg prices. However, there's now more yearround breaking and a growth in liquid egg output relative to frozen. The industry has grown into an important agribusiness in its own right—in fact, becoming the major growth segment of the egg trade.

While egg production has increased since World War II, total per capita use has declined from 393 eggs in 1951 to 294 last year.

All of the drop was in shell egg use. Processed use rose from 28 to 32 eggs per capita between 1951 and 1973 as some of the factors that made consumers shun shell eggs bolstered the use of processed products.

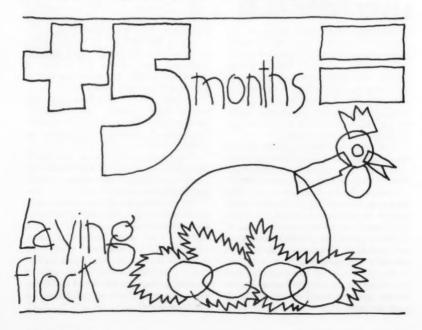
For example, more working wives with less time to cook have made big breakfasts with eggs and trimmings pretty much a thing of the past, at least during the workweek.

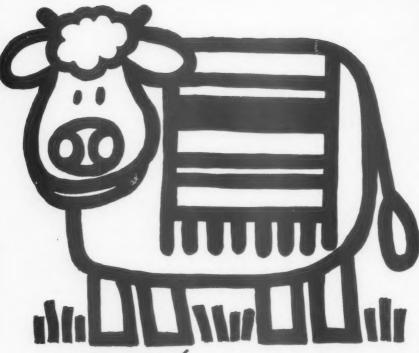
But its frequent replacement—the continental pastry and beverage—does contain some processed egg. Likewise, the homemaker who bakes a cake from a prepared mix may also be using processed eggs.

The trend toward more awayfrom-home eating has also made for egg product gains by bolstering use by restaurants, hotels, and other institutional feeders who rely heavily on the convenience of processed egg products.

USDA economists anticipate that egg products use will keep on growing—and in time may become big enough to offset the decline in shell egg use and thus stabilize total per capita egg consumption.

Projections made recently by the economists indicate that production of egg products could be up to 1.3 billion pounds by the start of the next decade—almost double last year's total. At that projected level of production, broken eggs would be worth big money—perhaps as much as \$318 million by 1980.





LIVESTOCK OLE

Mexican livestock sales to the United States last year declined to their lowest level in several years. In 1973 some 669,000 head moved north across the border, compared with the peak of 937,000 in 1970.

Currently Mexico is the largest supplier of stocker and feeder cattle to the United States and a major supplier of boneless beef.

But future prospects for beefed up trade are not bright as Mexico's own demand for meat increases and fewer cattle are available for export.

The seeds for Mexico's own beef boom were sown in 1972 when their swine producers stepped up their hog marketings in anticipation of higher prices and poultry producers got caught between rising feed prices and overproduction.

As a result of oversupply and lower prices, many producers began reducing their breeding stock of pigs

and poultry.

By January 1, 1973 dwindling pork and poultry supplies began to stimulate demand for beef.

About the same time retail prices in Mexico's domestic markets skyrocketed on limited quantities of meat and people ate less red meat for the first time in 5 years.

Finally in an effort to stabilize retail beef prices, the Mexican government set monthly boneless beef export quotas beginning in March 1973.

Projected increases in the cattle population over the next 5 years will about keep pace with Mexico's net population growth.

On the other hoof, the new government policy of withholding some of the traditionally exported feeder cattle for eventual domestic slaughter, combined with an increase in average carcass weights, could enable Mexico to meet domestic beef demand and continue beef exports but at probably a reduced level.

TUNISIAN ROUNDUP

"Don't Fence Me In," may have been a popular tune but it ranks low on the hit parade list of some SRS

livestock statisticians.

Roaming cattle and sheep have Norman Beller, Chief of SRS Sample Survey Research Branch, and his colleagues "tied to the hitching post" in developing improved statistical procedures for estimating livestock inventories and surveying production practices in Tunisia.

Managing livestock in Tunisia is a far cry from the way it's done here within fenced pastures and feedlots. A large proportion of the Tunisian herds are raised under nomadic conditions, grazing along the roadside or on leased plots of land for a

day or a week.

Consequently, improving estimates in Tunisia isn't simply a matter of transplanting what works in the United States, notes Beller.

To cope with the problem of roaming livestock, Beller's group has had to develop special procedures to insure accounting for all livestock on selected land segments.

This livestock inventory is the first ingredient in a total livestock information system SRS is developing in cooperation with the U.S. Agency for International Development (USAID) and the Tunisian Statistical Institute. The livestock survey was conducted in May and the results will be released in mid-August. In addition to the inventory, a profile of the Tunisian farmer will be developed.

Key data sought include the farmers' information sources, number and kinds of livestock, uses of his land, and methods utilized in raising and managing livestock.

Future SRS projects in Tunisia may include: a followup livestock survey in 2 years, training Tunisian statisticians, and providing the Tunisian Statistical Institute with computer programs and know-how.

STATISTICAL GROWTH

If the seeds planted at the recent East Africa Agricultural Economics Society conference are nutured to maturity, five African nations may move from an obsolete crop production estimating program toward the modern methods used by SRS.

SRS Methods Staff Chief, Robert Freie, suggested the well developed estimating techniques of area frame sampling and objective yield measurements as replacements to the word-of-mouth system now commonly being used by Uganda, Kenya, Ethiopia, Zambia and Tanzania.

The root of introducing any modern forecasting system lies in securing a firm commitment on the part of the African leaders themselves. Only then can the plans be fully developed. Some outside financial and technical assistance may be needed.

Freie's recommendations call for probability sampling procedures widely used by SRS in its own crop and livestock estimates. This approach provides statisticians with a way of computing sampling errors which means the production estimates can be made with a known

degree of precision.

Both area frame sampling and objective yield measurements are based on this statistical approach. The area frame uses a sample of randomly selected land segments to represent the Nation's agriculture. In the other method, field workers use plant counts, measurements, and crop development information from thousands of small plots in fields scattered across the country to determine yields and production.

HONEYMAKER MONEYMAKER

Bees' honeymaking talents are moneymaking talents—worth an estimated \$105.7 million to U.S.

farmers last year.

For the Nation's 1973 honey crop—238 million pounds, up 11 percent from 1972—farmers received an average of 44 cents a pound for extracted, chunk, and comb honey. That was a whopping 47 percent above the 1972 average price of 30.2 cents a pound and the highest price on record.

Florida was the leading honey State in 1973 with a production of 33.5 million pounds, followed by California with 31.0 million. Minnesota and South Dakota were next with 15.3 million and 14.4 million

pounds, respectively.

First indications regarding the 1974 honey crop will be released in SRS' Honey Report on September 25. Greater revenue last year allowed beekeepers to upgrade the quality of hives, and colony numbers may increase slightly. Between 1972 and 1973 they remained fairly stable at around 4.1 million.

Of course, the almost all-controlling factor in the level of honey production is that unpredictable input—weather.

Bees gather nectar to make

honey—and there are a number of weather conditions under which nectar flow is restricted, particularly when it is cool and wet.

Thus far in 1974, however, weather has favored honey production in many important producing

areas.

In addition to their earnings from honey, beekeepers also gain income from leasing their bee colonies for pollinating at least 62 U.S. seed and fruit crops—ranging from alfalfa to watermelons—to improve yield and quality.

Bees encourage crop pollination and help compensate for bad weather by pollinating when conditions are unfavorable for self

pollination.

Beekeepers also derive income from sales of beeswax—worth an estimated \$3.1 million to farmers last year. Per pound, the price of beeswax was up to an average of 74 cents, 12 cents higher than in 1972.

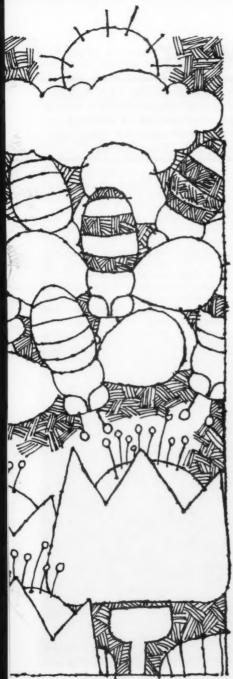
Beeswax has many commercial uses in the manufacture of polishes, candles, crayons, and cosmetics.

Another important use of beeswax is in the manufacture of sheets of artificial foundation for beehives.

BEE BIOGRAPH

Although the honeybee, believe it or not, ranks as one of the world's oldest domestic animals, it wasn't until the last century that man learned how to manage bees so that they could really produce honey on a commercial scale.

In the centuries between the civilization of ancient Egypt (about 3500 B.C.) and the United States of the early 1800's, about the only help the bees got from beekeepers was with housing—and it was pretty primitive housing at that. Introducing a section of a hollow log, a wooden box, or a twisted straw hive was about as far as a beekeeper would go to attract a new colony into



his apiary. Then he would simply let nature take over.

The first major breakthrough in beekeeping came about the middle of the 19th century, when two Americans hit upon the innovations necessary to transform beekeeping from a small farming sideline into a commercial enterprise.

About 1840 Moses Quinby of New York placed boxes capable of holding about 5 pounds of honey over holes in the top of box hives. By replacing these boxes as they filled with honey became developed a method of multiple story beekeeping in which the actual nest of the colony remained undisturbed. Prior to that removal of the honey often meant destruction of the hive.

Then, a decade later, a New England clergyman named Lorenzo Langstroth discovered the "bee space" and invented the first truly movable frame hive.

Langstroth's bee space proved to be an area of about 5/16 of an inch between surfaces which was ideal for filling up with honey. Wider spaces the bees would fill up with comb; narrower spaces would be cemented up with a substance called propolis.

The work of these two Americans allowed the industrial revolution to catch up with beekeeping.

Manufacturers shortly producing standard interchangeable frames and hives. Then came the inventions of wax comb foundations and the centrifugal honey extractor. By the 1870's coordination of all these developments led to commercial honey production much as we know today.

Modern apicultural research has built upon the foundations laid last century to the point where efficiently managed hives can produce honey crops of 150-200 pounds-with two-queen colonies yielding as much as 500 pounds. Last year the U.S. average was about 58.1 pounds of honey per colony.

SURVEYSCOPE

To give our readers a clearer picture of the vast scope of SRS activities, Agricultural Situation presents a series of articles on special surveys undertaken in various States. While these are not national surveys, they are important to the agriculture in individual States.

Pennsylvania farmers have an "inside tip" on the going rates for a variety of farming jobs performed by custom machine operators.

Their source: results of an annual survey of 300-400 custom operators

throughout the State.

Custom rates are up nearly 6 percent from a year ago explains Jerry Fluke, Statistician in Charge of SRS' Crop and Livestock Reporting Service at Harrisburg. He attributes this to increased costs and the use of bigger and more sophisticated machinery.

A cooperative State-Federal project in Pennsylvania for the past 10 years, the survey inquiries are sent to custom operators each April.

The initial mailing list was developed by county agricultural agents, and has been updated annually with names and addresses of new operators provided by reporting custom operators.

The survey compiles custom rates for such work as harvesting various crops, plowing, planting and spraying along with rates for a variety of miscellaneous farm jobs.



Pennsylvania farmers have an inside tip on the going custom rates for many farm jobs . . .

Rates for most jobs are reported per acre, bale, ton, or bushel rather than by hour to compensate for differences in machine sizes. However, some jobs like bulldozing, manure loading and spreading are reported on an hourly basis.

Because of differences in terrain and soils, average rates are calculated for both mountain and valley

areas in the State.

The survey results show potato harvesting is expensive custom work averaging \$65.50 per acre.

Corn picking and shelling came to \$11.90 an acre while combining small grains averaged about \$8.70.

Average custom ranges reported for other activities were: plowing stubble, \$5.70 an acre; disking with harrow on cultipacker, \$4.45; conventional till planting of corn and fertilizer, \$3.75; and reduced till planting, \$5.50.

Pennsylvania's custom rate report provides a guide for farmers as well as custom operators in negotiating appropriate rates.

Agricultural engineers at Pennsylvania State University analyze the rates to determine whether farmers are better off to hire or buy certain types of farm equipment.

Pennsylvania farm magazines and the county agricultural agents help in providing widespread distribution of the survey results.

Pennsylvania farmers rank close to the national average in use of machine hire and custom work.

According to the 1969 Agricultural Census, there are 38,000 commercial farms grossing over \$2,500 in Pennsylvania. Of these, about three-fifths reported farm expenditures totaling \$10.7 million for machine-hire and custom work.



. thanks to a State-Federal cooperative survey of operators throughout the State.

Briefings

RECENT REPORTS BY USDA OF ECONOMIC, MARKETING, AND RESEARCH DEVELOPMENTS AFFECTING FARMERS

FARM INCOME REVISITED The realized net income of farmers from farming reached \$32.2 billion in 1973, according to a recent reappraisal of the earnings picture made by USDA economists. The revised income figure is sharply higher than the preliminary estimate of \$26.1 billion made in January 1974. Information that came in during April and May indicated last year's marketing receipts surpassed the economists' original expectations: 1973 sales of crops grown in 1972 and of crops formerly stored on the farm under government loan were much larger than anticipated, plus livestock receipts were slightly higher. Also, while production expenses climbed steeply last year, the gain wasn't quite as sharp as had been estimated in early January.

THE VIEW AT PRESENT Based on curent supply and demand factors, realized net farm income in 1974 will probably be off some \$6-8 billion from last year . . .but this outlook could be altered considerably by unexpected changes in domestic and foreign demand and output of farm products. With grain stocks at historically low levels, any up or down in production or demand either at home or abroad could alter the projected supply and use levels. Also, the expected easing of crop prices in second half 1974 could be accentuated if foreign and domestic crops are much larger than foreseen, or could be stronger if they don't live up to expectations.

REAL ESTATE REVIEW Farmland values soared a record 25% to \$310 an acre in the year ending March 1, 1974 as prices were bid up partly because farmers had such a good income year in 1974, but also partly because they were extremely optimistic about farm income levels in the future. The expanded export opportunities for our farm products heightened interest in buying farmland. At the same time, farmland owners and heirs saw more financial benefit in holding onto farmland, at least as long as prospects stayed favorable for sizable gains in land prices or rents.

coming up Next.... There's little doubt in the minds of USDA economists that farm real estate values will continue to climb through March 1975. The only question is how much. The economists think a slowdown in the rate of gain to around 15% is likely, given the following factors on the horizon: a projected decline in farm exports from \$21 billion in fiscal 1974 to \$17-19 billion in fiscal 1975... at least a 5% gain in the index of prices paid by farmers as a result of the energy crisis and generally tight production input supplies.... higher interest rates and interest payments.... a drop of some \$6-8 billion in net farm income from 1973.... and a reduced demand for rural residences and rural properties in general as a result of tight personal budgets and uncertainty over the availability of future gasoline supplies.

PUTTING BACK THE BLACK This fall some cattle feeders may turn a profit again after a long period of running in the red. USDA economists expect some price recession from summer levels, but they note that some of the finished cattle sold this fall will be those that were bought during the spring and summer at much lower prices.

BUT COW-CALF OUTLOOK ISN'T BRIGHT While cattle feeders may have a better second half in 1974, cow-calf operators likely won't. USDA economists expect feeder cattle prices to stay under heavy pressure because there are just too many young cattle on hand during a time of declining feedlot replacements.

THE TOTAL U.S. CATTLE HERD has been building up over the last decade or so, and especially over the last 3 years. Now it's so big the economists say we have the potential to expand cattle slaughter 10% a year for the next 3 years and still not eliminate our ability to keep expanding U.S. cattle numbers. Despite some liquidation of cows during the current year, the 1974 calf crop is expected to be the largest in history.

THE HOG PICTURE.... The outlook for hogs matches that for cattle: the profit picture is likely to be good during the fourth quarter as hog producers benefit from an expected decline in feed prices. Fall hog slaughter is expected to be up seasonally about 10% over summer and total a little higher than fall 1973. USDA economists forecast the average price level for hogs this fall at about \$30 per cwt. Although October-December supplies are expected to be seasonally above the summer level, they may be only 2-4% above last last.

A LONGER LOOK Next year's hog outlook rides on how much returns actually improve during second half 1974. As of late June, producers reported intentions of cutting sow farrowings during June-November by 2%, which would trim first half 1975 slaughter. However, if second half 1974 hog prices are in the mid-\$30 range and cheaper feed grains materialize, second half 1975 pork production may not suffer further cutbacks.

TURKEY TALLY.... Turkey marketings this fall are expected to trail last autumn's by a considerable margin, judging from the 7% drop in May's poult hatchings and the 8% falloff in eggs in incubators on June 1. But even though output may be down, record large storage stocks will mean larger turkey supplies during the big September-December marketing season. The large turkey supplies, coupled with large supplies of other meats, will temper the price gain that occurs seasonally during September-December.

SUMMING UP SOYBEANS.... As the 1973/74 marketing year drew to a close, it seemed both crushings and exports were headed for new record highs. At an estimated 810 million bushels, the crush was up about a tenth from the previous year, largely because of the strong demand for soybean oil. Exports were estimated at 550 million bushels, also up sharply from 1972/73's 480 million.

LARGER RESERVES.... Despite the market strength, which pushed total soybean use in 1973/74 to about 1.45 billion bushels, consumption still fell a little short of production. Consequently, for the first time in 4 years, there was a buildup in soybean stocks.

THE CARRYOVER COUNT... As of September 1, there were an estimated 170 million bushels of beans in reserve. Though stocks are about three times larger than last season's carryover, they represented only about a 6-week supply at prevailing usage rates. That's not too different from some earlier years when the carryover was less than half this September's volume.

A LOOK AHEAD Soybean supplies for 1974/75 are projected at a record 1.6 billion bushels, on the basis of mid-July production expectations and the 1974 carryover. Demand should stay strong through 1974/75, and use will probably rise to about 1.5 million bushels. But that would still allow for a carryover of around 100 million bushels on September 1, 1975.

Statistical Barometer

Item Farm Income:	1972	1973	1974—latest available data	
Volume of farm marketings (1967=100)	112	_	101	1
Cash receipts from farm marketings (\$bil.)	60.7	_	103.0	4
Realized gross farm income (\$bil.)	68.9	-	108.2	9 3
Production expenses (\$bil.)	49.2		80.0	3
Realized net farm income (bil.)	19.7	232.2	28.2	
ncome and Spending:				
Disposable personal income, total (\$bil.)	797.0	882.5	930.5	3
Expenditures for food (\$bil.)	125.0	138.8	149.8	
Share of income spent for food (percent)	15.7	15.7	16.1	
Prices:	405			
Consumer price index, all items (1967=100)	125	131	146	May
Food (1967=100)	141	153	160	May
Farm Food Market Basket:1	101	1.40	100	
Retail cost (1967=100)	121	142	160	May
Farm value (1967=100)	124 40	164 45	164	May
Farmer's share of retail cost (percent)	40	45	40	May
Food Consumption Per Capita: All food (1967=100)	104	102	104	D.A.o.
Animal products (1967=100)	104	99	101	May
Meat (1967=100)	104	98	101	May
Poultry (1967=100)	113	109		May
Fish (1967=100)	113	116		May
Eggs (1967=100)	95	90		May
Dairy products (1967=100)	100	100		May
Animal fats (1967=100)	84	81		May
Crop foods (1967=100)	104	105	106	May
Fruits (1967=100)	99	101		May
Vegetables (1967=100)	101	104	_	May
Cereal products (1967=100)	98	99	_	May
Vegetable fats and oils (1967=100)	120	124	_	May
Sugar and sweeteners (1967=100)	108	110	_	May
Coffee, tea, and cocoa (1967=100)	100	96		May
Farm Real Estate:				
Total value, March 1 (\$bil.)	230.5	259.5	324.0	June
Value per acre, March 1 (\$)	219	247	310	June
Farm Debt, January 1:				
Farm mortgage debt (\$bil.)	31.4	34.5	39.5	June
Short-term debt excluding CCC (\$bil)	33.3	37.3	41.7	June
CCC loans and guarantees (\$bil.)	2.3	1.8	.5	June
Agricultural Trade:				
Agricultural exports (\$bil.)	9.4	17.7	9.6	JanMay
Agricultural imports (\$bil.)	6.5	8.4	4.4	JanMay

¹Average quantities per family and single person households bought by wage and clerical workers, 1960-61, based on Bureau of Labor Statistics figures.

*Revised.

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